

# **CAP-Malaria Project**

## **Year-4 Work Plan-Thailand**

**PMI/USAID/FY-2015**

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## ACRONYMS

ACT	Artemisinin Combination Therapy
ARC	American Refugee Committee
ARM	Artemisinin Resistant Malaria
BCC	Behavior Communication Change
BVBD	Bureau of Vector Borne Diseases
CHB	Chanthaburi
CAP-Malaria	Control and Prevention of Malaria Project
COP	Chief-of-Party
CQ	Chloroquine
DCOP	Deputy Chief-of-Party
DHO	District Health Office
EDAT	Early diagnosis and appropriate treatment
GFR10 SSR	sub-sub-recipient Global Fund Round 10 (Malaria)
HC	Health Center
HE	Health Education
HH	Household
IEC	Information, education, communication
IOM	International Office for Migration
IPC	Interpersonal Communication
IRS	Indoor residual spraying
LLINs	Long-lasting Insecticide Treated Nets
MCH	Maternal and Child Health
MV	Migrant Volunteers
MOFA	Ministry of Foreign Affairs
MOPH	Ministry of Public Health
NMCP	National Malaria Control Program
OD	Operational District
<i>Pf</i>	<i>Plasmodium falciparum</i>
PHO	Provincial Health Office
PMI	President's Malaria Initiative
<i>Pv</i>	<i>Plasmodium vivax</i>
RAI	Regional Artemisinin-Resistant Initiative (Global Fund)
RDMA/OPH	Regional Development Mission/Office of Public Health (USAID)
RDTs	Rapid Diagnostics Tests
RNG	Ranong
SAK	Sa Kaeo
SME	Small and medium enterprises
TES	Therapeutic Efficacy Surveillance study
TICA	Thailand International Coordination Agency
URC	University Research Co., LLC.
USAID	United States Agency for International Development
VBDC	Vector Borne Disease Center (Thailand, district level)
VBDU	Vector Borne Disease Unit (Thailand, provincial level)
VHV	Village Health Volunteers

## 1 EXECUTIVE SUMMARY

The Control and Prevention of Malaria (CAP-Malaria) is a 5-year project (October 14, 2011 – October 13, 2016) funded by President's Malaria Initiatives (PMI) and United States Agency for International Development (USAID). CAP-Malaria/Thailand is implemented by University Research Co., LLC. (URC)

CAP-Malaria has gone through strategy shifts in Y2 and Y3 to reflect the PMI's shifts towards direct country assistance through direct government-to-government assistance (G2G). CAP-Malaria provided technical assistance to the Bureau of Vector Borne Diseases (BVBD), Ministry of Public Health (MOPH) in the development of "Strengthen of Prevention and Control of Malaria (SPAC) project" and later its implementation.

In Y2-Y3, CAP-Malaria began to implement activities in the target areas to engage local communities to in malaria control and prevention. Networks of migrant volunteers were identified in Ranong and Chanthaburi who work alongside government's Village Health Volunteers (VHVs) to distribute free LLINs to migrant communities, and engaged farm owners to distribute LLIN in selected villages in Kraburi (Ranong) and Pongnamron (Chanthaburi) to maintain continuous LLIN coverage among mobile-migrant. CAP-Malaria introduced bi-lingual materials to be used by migrant volunteers (MVs) and health staffs during community outreach activities. Motorcycle taxi volunteers and employers are also engaged because they come in direct and regular contacts with the migrant communities in their villages.

In Year 4, CAP-Malaria implementation will have to two major themes: a technical role to support BVBD's SPAC-Period 2 Therapeutic Efficacy Surveillance study (TES) and implement project activities to achieve the project targets in the reduced target areas as part of the scale-back strategy in Ranong, Chanthaburi, and Sa Kaeo.

CAP-Malaria is facilitating integration of malaria services into the primary health care. To promote strategic and timely use of malaria surveillance information, working group at the provincial and district levels comprising of local implementing partners will not only facilitate coordination and identify gaps, but also provide opportunities to regular update malaria information allowing partners to adjust their implementation to target activities where they are most needed. In recent years, malaria cases among Thai are closely associated with risky behavior such as logging and forest-related activities. CAP-Malaria will mobilize Thai VHVs and MVs to provide outreach in their community and to share information about risk activities or groups in their community so that control measures can be implemented. A total of 10,000 LLINs distribution will be conducted utilizing local malaria information to identify hot spot villages in Ranong, Chanthaburi and Sa Kaeo. New target areas will include 1 district in Sa Kaeo province in Klong Hat. The latter district is adjacent to the pre-elimination malaria campaign taking place in Sampav Loun operation district in Battambang, Cambodia. In all its activities, CAP-Malaria will ensure local buy-in and ownership to ensure efforts will be relevant and sustainable as the project exit.

## 2 BACKGROUND AND CONTEXT

The goals of the National Malaria Strategic Plan (2014–2018) are to reduce malaria burden so that Malaria is not a risk for Thai people and Thailand is free from malaria by 2018.

The specific objectives to achieve this goal include:

1. Increase number of districts without malaria transmission up to at least 95% (883 districts) by 2018
2. Reduce API to be less than 0.20 per 1,000 populations by 2018
3. Reduce malaria case fatality rate to be less than 0.01% by 2018

Routine malaria control activities are funded through the national budget with additional resources from the Global Funds Single Source Fund (GF-SSF, Strategy to Contain Artemisinin Resistant Malaria Parasites) and the GF-RAI (Regional Artemisinin Initiative) to support improvement in detection and responses to all *P. falciparum* cases. The challenges for achieving these goals and objectives will be to sustain the intensity of malaria control program and pre-elimination efforts with decentralized efforts and dwindling national budget.

## 3 CAP-MALARIA/THAILAND GOAL AND OBJECTIVES

**Goal:** To reduce malaria morbidity and mortality and delay the spread of Artemisinin resistance in the Greater Mekong Sub-region.

**Objectives:**

1. To increase access and uptake of malaria prevention through scale-up of village-level community engagement
2. To increase availability and accessibility of malaria services (diagnosis and treatment and compliance to treatment), and to increase uptake of these services among intended users, through engagement with local public health offices and non-health sectors
3. To facilitate use of malaria information in responses to local situation and context
4. To support twin-cities model for cross-border collaborations in malaria control and prevention in target border provinces

## 4 GEOGRAPHICAL AND POPULATION COVERAGE

**Sa Kaeo** – Geographical coverage in Y4 will see an expansion in Sa Kaeo which shares borders with Sampav Loun Operational District (OD) in Battambang Province where the Cambodia counterpart is spearheading pre-elimination strategies, also supported by CAP-Malaria. Under the advice of PMI/USAID, CAP-Malaria plan to expand into target districts in Sa Kaeo to strengthen case management and information sharing for situation analysis including cross-border collaborations with local Cambodia counterparts.

**Figure 1. Thailand map showing the four provinces and districts (marked with star symbols) where CAP-Malaria is implementing activities in Year 4 (October 2014 to September 2015)**



**Table 1: Geographical coverage:**

	<b>Year1 (Oct11-Sep12)</b>	<b>Year 2 (Oct12-Sep13)</b>	<b>Year3 (Oct13-Sep14)</b>	<b>Year4 (Oct14-Sep15)</b>
<b>Provinces</b>	<b>District</b>	<b>District</b>	<b>District</b>	<b>District</b>
Ranong	1. Kraburi	1. Kraburi	1. Kraburi 2. La-un	1. Kraburi 2. La-un
Chanthaburi	1.Pongnamron	1.Pongamron	1.Pongnamron	1.Pongnamron 2. Soidao
Sa Kaeo				1. <i>Klong Hat*</i>

*\*Situation analysis will be conducted to assess needs and gaps. Both districts are under the same VBDU.*

**Table 2: Population (Thai) in the A1+A2 areas in proposed target districts (Jan-Dec 2014)**

<b>Provinces (1)</b>	<b>District (2)</b>	<b>Total local Residents (3)</b>	<b>Pop at risk by stratification (Area: A1+A2) (4)</b>	<b>Total Village (5)</b>	<b>A1 Village (6)</b>	<b>A2 Village (7)</b>	<b>% of at risk population (8)</b>
<b>Ranong</b>	Kraburi	<b>45,786</b>	<b>26,583</b>	60	3	41	66.3%
	La-un	<b>13,625</b>	<b>7,003</b>	30	0	18	
<b>Chanthaburi</b>	Pong Nam Ron	<b>39,306</b>	<b>23,586</b>	47	6	30	60%
	Soi Dao	<b>62,917</b>	<b>10,193</b>	68	2	19	16.2%
<b>Sa Kaeo</b>	Klong Hat**	36,094	0				
		<b>197,728</b>	<b>67,365</b>	302	13	135	32.4%

(3) Mid-year census 2012; (4, 6, 7) is based on 2013 malaria stratification from BVBD in July 2014.

*\*\*Situation analysis to be conducted to assess needs and gaps*

**Table 3: Number of malaria screened and confirmed in the proposed districts (Jan-Dec 2013)**

<b>Areas</b>	<b>Exam</b>	<b>Positive</b>	<b><i>P. falciparum</i> (%)</b>	<b><i>P. vivax</i> (%)</b>	<b><i>Others</i></b>
<b>THAILAND</b>	1,766,532	27,139	11,669 (42)	15,285 (56)	548
<b>Sa Kaeo</b>	52,877	57	6(10)	50(87)	1
<b>-VBDU 3.2.5*</b> (Wattana Nakorn, Klong Hat)	13,136	13	1(8)	12(92)	0
<b>Ranong</b>	45,751	1,475	587 (39)	870 (58)	22
<b>-Kraburi</b>	20,401	912	262 (28)	636 (69)	15
<b>-La Un</b>	8,139	294	180(61)	114(38)	0
<b>Chanthaburi</b>	10,1484	284	16 (5)	268 (94)	2
<b>-Pongnamron</b>	17,002	72	3 (4)	69 (96)	0
<b>-Soidao</b>	21,614	48	2(4)	46(95)	1
<b>Total</b>	266,502	10,345	4,058(39)	6,243(60)	62

Source: MIS accessed on July 28, 2014, \*Source: MIS accessed on Dec 8, 2014 from Oct-13 to Sep-14



## 5 ACHIEVEMENTS TO DATE AND PROGRESS

### Prevention

- LLIN distribution
  - Distributed 10,000 LLINs to in 14 villages targeting mainly migrant workers, including distribution through net lending to farmers/employers in 8 villages.
- Prevention – Health education (HE) and BCC activities
  - IPC communication through MP workers and migrant volunteers to 2,386 Thai (994 males, 747 females) and 1,484 migrants (788 males, 636 females).
  - IPC communication through motorcycle taxi volunteers reached 299 Thai (146 M, 153 F) and 1,882 migrants (1,048 M, 834 F). Approximately 14% of passengers were taken to health facilities, most of whom were migrants.
  - Reached 4,540 through malaria week and WMD activities

### Case Management

- Supported 4 MPs and monthly monitoring by the District Health Office in La-un where 742 people were screened for malaria and provided HE (10 Pf, 20 Pv, MPR 4.04%) and were treated according to national treatment guideline
- Provided training for 38 MP workers set up and funded by in Tak PHO's budget to support expansion of community level malaria services.
- Trained 58 HPH staffs in (10 in Chanthaburi, 8 in Ranong, 40 Tak) to provide malaria diagnosis service along with other primary health services and antenatal services

### Twin-cities

- Exchanged information using modified MBDS form for Kawthaung-Ranong (KT-RNG) and Pailin-Chanthaburi (PL-CHB).
- Worked with BVBD and IOM to evaluate of bi-lingual BCC/IEC materials developed under GF-SSF used by the public health sector and NGOs in Thailand.
- Bi-lingual patient card was launched in PL-CHB to help increase compliance to DOT and Follow-up.
- Combined HF maps between KT-RNG, volunteers information to be included

## 6 CHALLENGES AND OPPORTUNITIES

**Mobile and migrant population (MMP):** Migrants are hard to reach because of their mobility, employment insecurity, legal status, and cultural differences. They may feel excluded from malaria services or unintentionally not included in the formal net surveys and distribution. Their migrant nature also means that many travel with little personal belongings such as bed nets. CAP-Malaria is engaging employers to serve as LLINs distribution channels through lending scheme. Networks of migrant volunteers will be expanded with regular monitoring to ensure their activeness, minimize turnover, and better linkage the local health system to reduce access barriers for migrant communities.

**Malaria diagnosis/treatment and follow up, particularly among migrants and cross-border population:** In Y3, CAP-M supported 4 MPs in La-un district based on MIS and gap in services.



CAP-Malaria will continue to engage these MP workers who have been trained and well experienced in community outreach activities.

CAP-M will support the Provincial Health Offices (PHO) and BVBD expand malaria services additional health facilities that previously did not offer these services. CAP-Malaria has started training Health Promotion Hospitals (HPHs) in La-un (Ranong), and Chanthaburi. The efforts will be expanded in Klong Hat, Sa Kaeo. Some locations will require continuous advocacy to maintain decentralize malaria services, particularly in area where there is active malaria transmission and implementation of centralize malaria control activities.

**Technical supervision:** In SPAC-Period 2, CAP-Malaria will provide a more technical support role in QA/QC for TES studies.

**Private sector (PS):** The public sector approaches to providing malaria services is largely through passive case detection, which can have limited reached to migrants who make up 50% of the case load. In Y3, CAP-Malaria initiated activities to engage SME employers to be proactive in providing malaria services (and health services) to their migrant workers. In Y4, CAP-Malaria plans to engage local civic groups and profession groups such as farm owner group or trade group for continued advocacy

**Cross-border collaboration:** Challenges include slowness in coordination, particularly in Burma due to frequent changes in leadership and vertical agreements are often required. CAP-Malaria is also working closely with counterparts to promote flexibility and direct coordination between twin-cities. In twin-cities pairs such as KT-RNG and PL-CHB, CAP-Malaria will assist local government in not only organizing regular meetings for advocacy of local buy-in and follow-up of activities, but the cross-border network will also engage more community level.

## **7 BRIEF SUMMARY OF Y4 ACTIVITIES BY PROGRAMMATIC THEMES AND PROVINCES**

In Y4, program implementation will encompass 5 objectives to achieve 5 Intermediate Results:

**IR 1:** Use of preventive interventions among population increased in CAP-Malaria areas. (Prevention)

**IR 2:** Use of quality malaria diagnostics and appropriate treatment increased among patients in CAP-Malaria areas. (Case Management)

**IR 3:** Use of strategic information for decision-making increased at the national and local levels in CAP-Malaria areas. (Malaria Information)

**IR 4:** Inter-agency and inter-country collaboration strengthened for malaria control services

**IR 5:** BVBD's SPAC-Period 2 TES component conducted according to timeline. (Technical Assistance)

The main objectives are to implement CAP-Malaria's project activities as proposed in the current workplan to achieve the project's goals and objectives as outline in IR 1-4. CAP-Malaria will also perform technical roles to support BVBD's SPAC-Period 2 as outlined in IR 5.

Intervention and BCC efforts will be more focused on community and village-based activities to ensure higher uptake of malaria interventions. Much effort in Y4 will be to ensure that these

integrated activities also engage relevant stakeholders from health and non-health agencies, as well as non-public sectors. Monitoring and supervision will be conducted with engagement of local malaria or health staffs to ensure local ownership. Strategic information including malaria foci and local information from networks of volunteers will be used to mobilize malaria control activities to current hotspots. To further increase access to malaria services for cross-border population on both sides of the borders, the twin-cities approach will also be expanded to the district and community levels.

- Expand and integrate network of volunteers with the local health system
- LLIN distribution and monitoring, as well as health education to ensure coverage and use
- Expand and monitor efforts in the integration of malaria services with primary health care services in CAP-Malaria target areas
- Promote partnership coordination for targeted responses based on situation analyses at the province, district and sub-district levels
- Expansion of activities in Sa Kaeo to complement pre-elimination activities in Cambodia
- Strengthen twin-cities collaborations and partnerships towards improving prevention and case management among migrant workers
- Strengthening technical support to SPAC-Period 2 TES component

## Prevention

According to the KAP survey in Kraburi, approximately half of the mobile-migrant population has awareness of malaria transmission and prevention, and that 76% of migrants interviewed owned any nets where less than half of those were insecticide treated nets (ITNs). Additional information from our LLIN monitoring indicated that when migrants cross-border to Thailand. Only 27% and 16% of migrants in 4 LLIN-lending villages in Kraburi and Pongnamron brought bednets when they arrived, respectively.

### *LLIN coverage*

The national target for LLIN coverage is 1 LLIN per 2 persons (updated for GF-SSF-Phase 2) in A1/A2 villages managed through the VBDCs/VBDUs and PHOs/DHOs. LLIN distribution for refugee and military personnel are managed by NGOs and the military counterparts, respectively.

*Recent review by the evaluator teams commented that the LLIN loan program had experienced a low return rate of lent net and that the process require large administrative. After 2 rounds of quarterly monitoring, an average of ~21% loss was experienced. For comparison, ~75% of migrants interviewed during monitoring visits did not bring any bed nets when they crossed the border to Thailand and had no access to LLINs prior to the lending scheme. To make adjustment, CAP-Malaria will continue to work with farm owners to ensure high LLINs coverage among migrant workers while not emphasizing the “lending component”, as the employer/farm owners represent provide a good access points to target M1 and M2 populations. CAP-Malaria will conduct periodic LLIN monitoring to assess the level of net coverage and net use among recipients in target villages, and physical conditions of LLINs.*

In Y4, CAP-Malaria will distribute 10,000 in Chanthaburi, Ranong, and Sa Kaeo based on malaria transmission and LLIN gap. Distribution mechanism will include antenatal care services at health facilities, household and employer-based distribution, and through active outreach activities.

CAP-Malaria may assist in the systematic distribution of GF-procured LLINs such as household and migrant census for net distribution, upon request.

### ***BCC activities and health education***

KAP survey and LLIN monitoring activities indicated that if migrants have access to net, they will likely use the nets (~86% of those who own bed net (or have access to bed net) reported sleeping under the bed nets previous night). CAP-Malaria will place efforts in maintaining high LLINs coverage among migrants. During net monitoring, reason for not using bed nets will be explored (e.g. night time working, preference, allergies) in order to tailor BCC messages.

IEC/BCC materials (Thai and bi-lingual) will be updated based on inputs from stakeholders and community members gather through formative assessment under twin-cities activities.

CAP-Malaria will expand the network of MVs to engage in targeted IPC in Ranong, Chanthaburi and Sa Kaeo. *In agreement with external evaluators, data for people reached by IPC is already sex-disaggregated.*

KAP migrant survey found that 55% of migrants rely on motorcycle taxi and 42% on their employers to go to the health facilities. Key messages on free malaria services to encourage uptake of services in government facilities should be emphasized to both migrants and those who come in contact with migrants such as employers or transportation sector. Key message will include avoidance of self-treatment and artemisinin monotherapy, and consequences of using counterfeit/substandard antimalarials. Recent malaria outbreaks among Thai forest cutters suggest that key messages should also be linked to activities and occupation.

As more primary health facilities are engaged in malaria case management, BCC tools (e.g. job aid and peer discussions) for these providers to promote compliance to good clinical practices will be considered.

Malaria day activities will be conducted in selected villages, and may be jointly conducted with neighboring villages (in Cambodia or Burma). Malaria Week activities (quarterly) will include blood screening and net treatment (treatment kit through VBDUs) and intensive HE. Selection of villages for Malaria week will be based on malaria situation analysis of malaria cases and stakeholder's inputs, particularly to peak transmission season and harvest season.

### **Case Management**

An emphasis for CAP-Malaria will be to strengthen capacity of local public health system to deliver integrated malaria services that are both quality assured and user-friendly, this may include improving completion rate of national indicators and GF indicators, e.g. case investigation and reactive case detection, compliance to malaria treatment (Directly Observed Therapy (DOT) and follow-up (FU)) of *Pf* patients (and *Pv* cases in lower transmission area).

In Y4, there will be a reduction in the number of community-level malaria service points in Ranong (15 MPs, 3 Border Malaria Posts (BMPs)) and Tak (14 MPs) previously supported by PMI/SPAC. At the same time as there is an effort to expand malaria services at Health Promotion Hospitals (HPHs, formerly Health Centers) supported by CAP-Malaria. For CAP-Malaria, the activities introduce malaria diagnosis (and treatment) in HPHs where primary healthcare services and maternal and child health services are currently offered: training of HPH staff in case management

for uncomplicated malaria and malaria screening and LLINs distribution for pregnant women, routine monitoring and supervision by DHO to ensure performance quality, and quarterly monitoring by CAP-Malaria. These activities have started in Q3-Y3 in all 8 HPHs in La-Un district, and in 10 HPHs in Pongnamron and Soidao districts. Reporting of HPH activities will feed into the national Malaria Information System (MIS) and Health Information System (HIS). Initially, these activities will be led by CAP-Malaria with engagement of local health authorities to ensure smooth transition of activities at the completion of the project. Continuous local advocacy will also be needed. GF-RAI will start to support 3 HPHs in La-un and 3 HPHs in Kraburi with monthly compensation and malaria commodities (previously facilitated by CAP-Malaria in Y3).

### Strategic Information

Thailand's MIS (formerly BIOPHIC) is an online database. However, the comprehensive nature of the MIS is not conducive for routine access by staffs at the local level. CAP-Malaria will coordinate local stakeholders to pool resources and facilitate Stakeholders' meeting at the provincial (~semi-annual) and district level (~monthly) to encourage use of strategic information. It will serve as platform for planning and coordination, monitoring progress, identifying gaps based on monthly situation analysis that incorporate both malaria information from partners and local environment/issues. In provinces with lower caseload and/or evidence of ARM, efforts will be review case-base information (transmission foci and case management quality). Below are suggested topics to be discussed.

Theme	Province	District and sub-district
Malaria epidemiology	Malaria cases <ul style="list-style-type: none"> <li>- by districts and villages</li> <li>- by risk groups</li> </ul> Integrate other supporting information such as entomology survey Map of malaria hotspots	Village based individual malaria map  Number of cases and location of villages
Prevention	Coverage by districts and village and identify gaps in province	Coverage by village and gaps in villages
Case Management in ARM hotspots	% case investigated %case DOT and FU	Information on individual case investigation, DOT and FU

### Coordination and Collaboration

A new Twin-cities pair, Sampav Loun (Battambang) and Sa Kaeo (SPL-SK) will be added to mobilize border malaria control on the Thailand side and complement pre-elimination efforts on the Cambodia side. While each Twin-cities pair will develop their own coordination plans, CAP-Malaria will provide TA support and facilitate the actions plans to achieve objectives.

- Information sharing and transparency in reporting situations relevant for malaria transmission and potential outbreaks and for appropriate planning and responses
- Improve case investigation and case management, especially among mobile and migrant workers and cross-border population
- Modification of BCC and bi-lingual BCC materials to fit local situations
- Strengthen cross-border collaborations on malaria as entry points for other collaborations

- Foster friendly relations between Twin-cities counterparts (health and non-health) which could potential translate to promoting migrant-friendly environment, improve access and uptake of available services.
  - o Although rather extreme, recent exodus of Cambodia migrant workers from Thailand almost 2 months after the military coup in Thailand may have some influence from misinformation and mistrust of Thai authorities by migrant workers.

*CAP-Malaria is mindful of the impact and sustainability of twin-cities model. Most activities are jointly implemented by twin-cities counterparts (facilitated by CAP-Malaria) and incur minimum cost once the system is set-up. Data sharing is built on MBDS platform (operated by national programs in the GMS). The bi-lingual patient card, jointly implemented in efforts to improve treatment compliance among cross-border patients, is based on the Thai-version already in-use.*

### Technical Assistance for SPAC-Period 2

In Y4, CAP-Malaria will continue to provide technical assistance to BVBD in program management of PMI/SPAC-Period 2 project focusing mainly on Therapeutic Efficacy Surveillance Studies (TES). For TES, a monitoring and supervision plan and tools has been prepared and will be applied in Period 2. Through regularly scheduled site visits, the team hopes to be able to troubleshoot issues (*e.g.* recruitment, enrollment, adverse effects) in a timelier manner and ensure data quality.

*In preparing for long term sustainability and exit strategy, CAP-Malaria will also looking into local technical consultant to control cost and build local expertise to provide additional technical support while working with BVBD in strengthening TES studies, monitoring and supervision, and parallel quality assured clinical and laboratory practices.*

### Key Indicators (linked to M&E Plan)

No.	Key Indicators	Data sources
<b>F. Indicators</b>		
1	Number of ITNs purchased with USG funds that were distributed (OP1F)	Project record: net distribution form
2	Number of health workers trained in case management with artemisinin-based combination therapy (ACTs) with USG funds	Training database or records
3	Number of health workers trained in malaria laboratory diagnostics (rapid diagnostic tests (RDTs) or microscopy) with USG funds	Training database or records
<b>Additional Indicators</b>		
1	Percentage of individuals in CAP-M project targeted areas who slept under an ITN the previous night (OC1)	CAP-M LLIN Routine monitor
2	Percentage of migrants in CAP-M project targeted areas who slept under an ITN the previous night (OC4)	CAP-M LLIN Routine monitor
3	Percentage of uncomplicated malaria cases treated according to national malaria treatment guidelines in CAP-Malaria targeted areas (OC5)	Patient's registry (EP1)
4	Number of individuals reached with malaria behavior change messages through interpersonal communication (IPC) in CAP-M targeted areas (OP4)	Volunteers report form, EP1
5	Percentage of twin-cities joint workplan implemented (OP8)	Twin-city report
<b>Project Indicators</b>		
1	Annual parasite incidence (API) per 1000 population reported from public health facility staff and village malaria workers in CAP-M target areas (IP1)	Mid-year pop; EP1



2	Percentage of TES site achieve target enrollment (OC7)	Site monitoring visit report
3	Percentage of SPAC-Malaria project milestone and reports submitted on-time to PMI/USAID/RDMA (OC8)	Site monitoring visit report
4	Number of malaria tests performed in CAP-M supported facilities (OP5)	Patients registry (EP1)
5	Number of confirmed malaria cases detected in CAP-M supported facilities OP6)	Patients registry (EP1)
6	Number of malaria cases treated according to national guideline in CAP-M supported facilities (OP7)	Patients registry (EP1)

## 8 PROPOSED ACTIVITIES AND JUSTIFICATION

### IR 1: Use of preventive interventions among populations increased in CAP-Malaria areas.

Indicators (\*F-indicators):

- \*Number of ITNs purchased with USG funds that were distributed
- % individuals in CAP-M targeted areas who slept under an ITN the previous night (OC1)
- % migrants in CAP-M targeted areas who slept under an ITN the previous night (OC4)
- Number of individuals reached with malaria behavior change messages through interpersonal communication (IPC) in CAP-M targeted areas (OP4)

#### *T1.1 Community-level distribution and promotion of ITNs*

*T1.1a Net census* (HHs and worksites) to assess LLINs gaps in 20 A1/A2 villages. Selection of targets villages will be based on analysis of malaria cases and existing net coverage. Breakdown of villages include 4 villages in La-un district and 4 villages in Kraburi district (Ranong), 4 villages in Soidao district and 4 villages in Pongnamron district (Chanthaburi), and 4 villages in Klong Hat district (Sa Kaeo).

*T1.1b Net distribution for migrants and Thai residents* will be conducted to reach the national target (2 persons per LLIN). Total of 10,000 LLINs will be distributed and top-up through the years in focusing in Ranong, Chanthaburi, and Sa Kaeo. To reduce LLIN gaps in between distribution/monitoring, buffer LLIN stocks will be with volunteers in the village.

*T1.1c Assist in distribution LLINs in CAP-Malaria target area.* If necessary, CAP-Malaria will assist in the transport and distribution of LLINs, or technical in census and monitoring as needed.

#### *T1.2 Monitoring of LLIN coverage, use, and durability*

*T1.2a Monitor of net use and top-up for new arrivals.* MVs help monitor net coverage and use, LLIN physical durability, and identify new arrivals to maintain LLIN coverage during the year.

#### *T1.3 Community-level BCC/IPC*

*T1.2a Interpersonal communication (IPC) in villages and workplace* will be done through VHV's and MVs, and non-health volunteers (motorcycle taxi drivers). Volunteers will mobilize within their community and conduct home or workplace visits at least 3 times a month reaching a minimum of 40 people. In Q1-Q2 will recruit at least one pair of Thai VHV's and MMV in each target village. As part of visits, volunteers will actively provide updates on new arrivals and LLINs needs, while inquire about net use and examine nets.



*T.1.2.b IPC through non-health actors* – Motorcycle taxi volunteers reports are collected monthly from 9 stations in Kraburi. This will be expanded to others district if it is relevant.

*T.1.2c Community mobilization among non-health sector and private sector* will be conducted to advocate for the improvement migrant health and improvement in malaria services. In addition to village level advocacy with village chiefs, business association or farmer association will be targeted as they represent community that comes in direct contact with migrants on a daily basis. Relevant government agencies or local administrative bodies will be engaged in these meetings.

*T1.2.d Community outreach in villages and workplace* will be done by MV and partners with the objectives of reinforcing IPC and to build collective buy-in from the community. Most activities will be in the evening to reach migrant workers, and offer more safety for staffs and volunteers when travel in groups to remote villages. Timing of activities will coincide with malaria transmission peak and local activities (e.g. harvest season or religious festival).

*T.1.2.e Malaria Day 2015* will be conducted in selected villages in the target district with plan to engage twin-cities counterparts.

IRs	Activities	Sub-activities	Geographica l area	Expected Outputs (Annual Targets)	Targets by quarter			
					Q1	Q2	Q3	Q4
T1	Use of preventive measures against malaria increased among at-risk populations in CAP-M areas							
T1.1	Community-level distribution and promotion of ITNs	a.Net census in village prior to distribution	Kraburi, Lanun, Soidao, Pongnamron, in Q1, SAK* in Q2	2 times (20 villages)	1	1		
		b. Net distribution for migrants, Thai residents		10,000 LLINs		6000	3000	1000
		c. Assist in the distribute USG-LLINs in CAP-M target area (if necessary)			Per request from BVBD			
T1.2	Monitor LLIN coverage / use	a. Monitor of net availability and use		2 times (20 villages)	1	1	1	1
T1.3	Community-level BCC/IPC	a. IPC in border villages and workplace		20,000 people reached	5,000	5,000	5,000	5,000
		b. IPC through non-health volunteers		15,000 people reached	3,000	3,000	3,000	3,000
		c. Community mobilization among non-health and private sectors		2 advocacy meetings		1		1
		d. Community outreach		8,000 people reached	2,000	2,000	2,000	2,000
		e. Malaria Day 2015					3,000	

## **IR 2: Use of quality malaria diagnostics and appropriate treatment increased among malaria patients in CAP-Malaria areas.**

Public health staffs have limited capacity to engage with migrants to ensure treatment compliance, DOT, and FU despite incentive scheme (GF-SSF). CAP-Malaria is working with counterparts in the provinces and twin-city counterparts to help improve diagnostic accessibility and service uptake, quality of services, compliance to treatment, and completeness of case investigation and follow-up patients for effective malaria control and containment in ARM hotspots. Monitoring of malaria services with primary healthcare services in the target areas to ensure quality services are

delivered. CAP-Malaria will explore complimentary training to ensure quality (e.g. cultural sensitivity of health staffs, training on IEC tools in various formats).

Indicators (\*F-indicators):

- \*Number of health workers trained in in case management with ACT with USG funds
- \*Number of health workers trained in malaria laboratory diagnostic [RDT or microscopy]
- Number of malaria tests performed in CAP-M supported facilities (OP5)
- Number of confirmed malaria cases detected in CAP-M supported facilities (OP6)
- Number of malaria cases treated according to national guideline in CAP-M supported facilities (OP7)
- % uncomplicated malaria cases treated according to national malaria treatment guidelines in CAP-M target areas (OC5)

### ***T2.1 Integration of malaria case management with primary health care services***

*T2.1a – Training and refresher on malaria diagnosis (RDT and microscopy) for HPH staffs to provide integrated malaria services to out-patients, and to new turnover staff.*

*T2.1b – Training and refresher on malaria case management with ACT for HPH staffs to provide integrated malaria services to out-patients, and new turnover staff.*

*T2.1c – Data reporting in MIS and HIS. Support activities to support data reporting for HPH and DHO staffs for HIS and VBDU staff for MIS.*

### ***T2.2 Monitoring and supervision of integrated malaria services***

*T2.2.1a – Supervision of HPH staffs by PHOs/DHOs as part of system strengthening. Initially, CAP-Malaria will conduct activities along with PHO/DHO staffs to assess performance, including inventory (storage and stock), patient's log completeness, and appropriate treatment.*

*T2.2.2b – Quarterly supervision on malaria case management will be done by CAP-Malaria field staff (scheduled and non-scheduled)*

### ***T2.3 Quality and uptake of malaria services***

*T2.3a – Cultural sensitivity for service providers to improve service delivery for migrants.*

*T2.3b – Job-Aid for HPH/ANC staff and IEC materials for patients include patient's flow-chart, treatment guideline, referral information for severe and pregnant malaria patients, and reporting checklist. To reduce anxieties, patient's life-course (pictorial, bi-lingual) will explain services to be expected during HPH visit. Profiles of CAP-Malaria trained MVs are available to help communication with migrant patients.*

*T2.3c – Advocacy with local health offices and private sectors to improve utilization of services. Long tradition of vertical program and current implementation has hindered previous efforts to decentralize malaria services and continuous advocacy is needed. Migrants depend on their employer for health services. HE / advocacy for Thai residents by HPH staffs will be included.*

IRs	Activities	Sub-activities	Geographical area	Expected Outputs (Annual Targets)	Milestones (Targets) by quarter			
					Q1	Q2	Q3	Q4
T2	Use of quality malaria diagnostics and appropriate treatment increased among malaria patients in CAP-Malaria areas							

T2.1	Integration of malaria case management with primary health care services	a. Training on malaria diagnosis	RNG, CHB, SAK,	40		40		
		b. Training on case management with ACT	RNG, CHB, SAK,	40		40		
		d. Data reporting in MIS and HIS and data quality	RNG, CHB, SAK,	20 facilities				
T2.2	Monitoring and supervision	a. Supervision of HPHs by PHO/DHO	RNG, CHB, SAK,	Monthly summary				
		b. Quality monitoring by CAP-M field team	RNG, CHB, SAK,	4	1	1	1	1
T2.3	Quality and uptake of services	a. Sensitivity training for service providers	RNG, CHB, SAK,	80 staff				
		b. Job-Aid for HPH/ANC staff and IEC for patient						
		c. Advocacy with health offices and private sector						

### IR3 Use of strategic information for decision-making increased at the national and local levels in CAP-Malaria areas.

CAP-Malaria collects and utilizes information through monitoring and supervision, and documentation of supportive activities to adjust project activities. To improve coordination with partners, CAP-Malaria will facilitate the development of provincial workplan in target provinces, during which we will advocate and leverage resources for better serve migrant populations

#### T3.1 Monitor performance of malaria case management

*T3.1a Support monitoring and supervision integrated malaria services* – CAP-Malaria plan to support PHOs/DHOs to monitor malaria services provided at HPHs (~quarter). Initially, CAP-Malaria staff will conduct joint visits as part of system strengthening to assess logistics, and other performance issues, e.g. data reporting, compliance to protocols and treatment guidelines.

*T3.1b Quarterly monitoring and supervision visits for CAP-Malaria activities* – Visit will be conducted in 3 target provinces by CAP-Malaria staff. Efforts will be made to coordinate supervision visit to coincide with other activities (e.g. provincial stakeholder's meeting) to save on travel cost and to ensure immediate feedbacks to the province.

*T3.1c Stakeholder's meeting and review of action plan* – In effort to leverage resources from various stakeholders and to improve coordination among partners, CAP-Malaria will advocate for a Provincial workplan, endorsed by local counterparts who also work in malaria endemic districts. Regular review of workplan will ensure timely implementation. Barriers or interruption and gaps can be quickly identified and resolved.

*T3.1d Working group meetings (district and sub-district level)* – Informal working group meeting (in coordination with DHO and VBDUs) and GF-SSF will be facilitated and serve as platform for reviewing previous activities, review case management indicators, review patients profile, and coordinate plan for upcoming month activities, and update Malaria village map.

*T3.1e Bi-Monthly staff meeting* to adjust plans to best adapt to local situations. Meeting sites will depend on activities and opportunities in Bangkok or province to minimize cost.

IRs	Activities	Sub-activities	Geographic area	Expected Outputs (Annual Targets)	Milestones (Targets) by quarter			
					Q1	Q2	Q3	Q4

T3	Use of strategic information for decision making increased at local, national, and regional levels							
T3.1	Monitor performance of malaria case management	a. Quarterly monitoring and supervision visits for CAP-M activities	RNG, CHB, SAK	Report finding	1	1	1	1
		b. Provincial stakeholder's meeting	RNG, CHB, SAK	Meeting report	1	1	1	1
		c. Working group meeting (district, sub-district level)	RNG, CHB, SAK	Meeting minutes	2	2	2	2
		e. CAP-M staff meeting		Meeting minutes	2	1	1	1

#### IR4: Malaria control services for mobile populations strengthened through inter-agency and inter-country collaboration

The goal is to strengthen environment for collaboration and partnership to improve diseases surveillance and control in a transparent environment between agencies and inter-country agencies. The objectives are to develop and implement targeted activities that align with regional and bilateral strategies.

Possible Indicators:

- Percentage of twin-cities joint workplan implemented (OP8)

#### T4.1 *Inter-agency and inter-country collaboration strengthened for malaria control services*

*T4.1a Workplan for twin-cities* – Activities will include coordinated twin-cities action plans updated bi-annually.

- Biannual coordinated workplan and reports
- Quarterly updates of twin-cities progress at alternating twin-city locations
- Expand malaria monthly data sharing
- Bi-lingual patient card to improve follow-up of migrants and cross-border patients
- Test and harmonize key messages in health education using bi-lingual BCC
- Engaging private (employer) sector with transnational businesses in malaria control
- Advocate for mobile phone platform for referral of patients
  - Cambodia – Hotline phone numbers will be promoted to provide information on malaria and available services in twin-city areas along Thai-Cambodia borders

*T4.1b Implementation and monitoring of twin-cities workplan* – Implement activities as outlined in the action plan. Organize site monitoring visits to follow progress and improvement.

*T4.1c Advocate for coordination with Special Working Group for Malaria Elimination (PSWME, Cambodia)* – Advocate for linkage between Sa Kaeo and Chanthaburi with PSWME in Battambang to leverage local political supports, to explore the role of twin-cities in malaria pre-elimination strategies in ARM hotspots (e.g. alert mechanism of *Pf* cases, cross-border surveillance, and linking patient database or malaria map).

IRs	Activities	Sub-activities	Geographi cal area	Expected Outputs (Annual Targets)	Milestones (Targets) by quarter			
					Q1	Q2	Q3	Q4
T4	Malaria control services for mobile populations strengthened through interagency and regional collaboration							
T4.1	Country level support and coordination to	a. Workplan for twin-cities	KT-RNG PL-CHB SPL-SAK	Meeting report	1	1	1	1
		b. Implement and monitor twin-cities workplan		Project report		1		1

	increase bi-lateral and sub-regional collaborations	c. Advocate for coordination with PSWME	PL-CHB SPL-SAK	Meeting report	1		1	
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## IR 5: Implementation of BVBD's PMI/SPAC Period 2 conducted in completion and time manner through appropriate technical assistance. (Technical Assistance)

Possible Indicators:

- % TES site achieve target enrollment

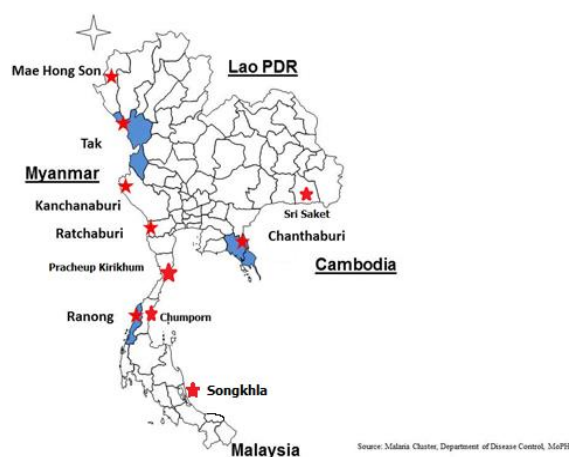
### T5.1 Technical Assistant for SPAC-Period 2

*T5.1a Site Monitoring visits by QA/QC TES consultant* – Site monitoring visit to each TES site in 10 provinces: Ranong, Chanthaburi, Tak, Kanchanaburi, Maehongson, Sri Saket, Songkhla, Chumporn, Prachuap Kirikhan.

*T5.1b Compensation for QA/QC TES consultant* – Quality Assurance/Quality Control (QA/QC) Consultant identified to provide TA which include quarterly site monitoring visit to 10 provinces to ensure studies are conducted according to WHO protocols. Standard forms for reporting and monitoring have been developed. The objectives is to engage with BVBD and VBDC staffs (province) in QA/QC activities and monitoring visits, such that in the latter half of SPAC Period 2, BVBD and VBDC will be able to conduct the activities with minimal TA from CAP-Malaria.

IRs	Activities	Sub-activities	Geographical area	Expected Outputs (Annual Targets)	Milestones (Targets) by quarter			
					Q1	Q2	Q3	Q4
T5	Implementation of BVBD’s PMI/SPAC Phase2 conducted in completion and in a time manner through appropriate technical assistance							
T5.1	Provide TA for SPAC-Period 2	a. Monitoring visits by QA/QC TES consultant	RNG, CHB, TAK, Sri Saket, Kanchanaburi, Ratchaburi,Chumporn Maehongson, Songkhla, Prachuap Kirikhan	4 visits per sites in 10 provinces				
		b. Compensation for part-time QA/QC TES consultant						

**Figure 2: Location of TES study sites supported by PMI's SPAC Phase 1 and Phase 2.**





## 9 PROJECT M&E

During Y2-3, CAP-Malaria revisited the M&E plan in response to changes in PMI/USAID M&E strategies. The list of performance monitoring indicators has decreased, with a greater emphasis on outcome and process indicators. The F-Indicators will be measured according the workplan.

In Y4, CAP-Malaria will work with the M&E team to streamline data to increase accessibility. Project staff will continue to work with MPWs, DHO, and VBDU staffs to use patient's data for tracking case management quality and to identify malaria transmission hotspot for planning subsequent malaria control activities. CAP-Malaria staff also uses findings to monitor performance of MPWs (e.g. ensuring appropriate anti-malaria regimen is used).

De-brief sessions will be conducted after monitoring visits and report to counterparts at BVBD, at provincial and district offices (as appropriate). Data is discussed among partners during stakeholders meeting (provincial level) and informal operation meeting (district level). Note: information derived from the community volunteers and workers local activities is also shared during operation planning and targeting outreach activities.

To strengthen availability of information on how the project is affecting women and men and to improve gender integration, CAP-Malaria will hire a consultant in Q2 to review current activities and approaches to ensure that the project's gender practices adopt global best practices and to build capacity in gender among gender staff and partners.

## 10 CAP MALARIA EXIT STRATEGY

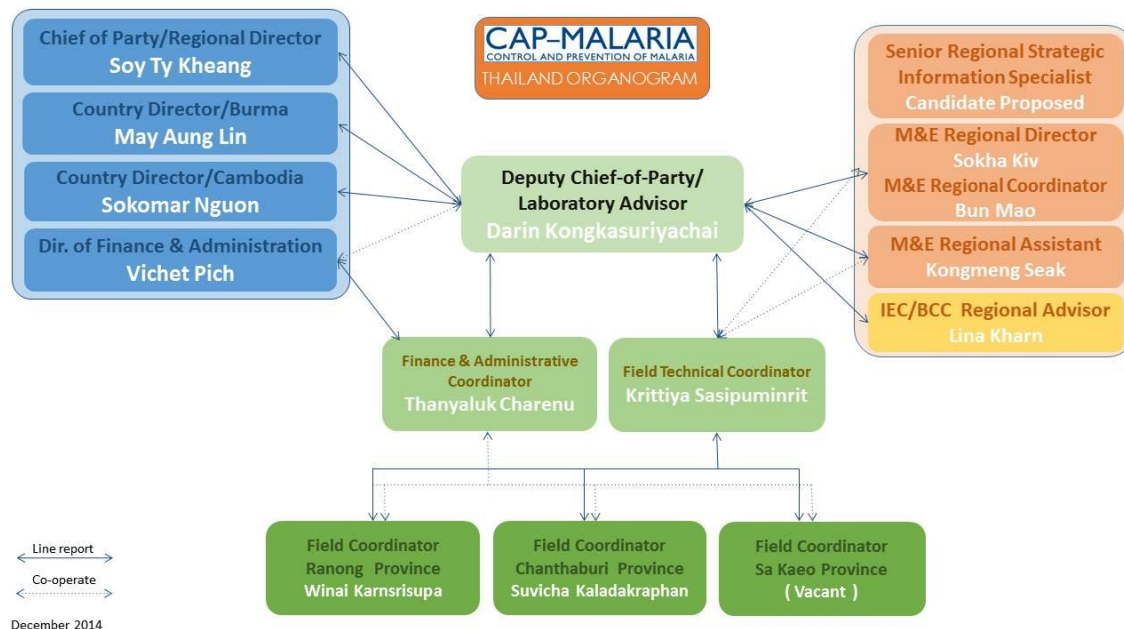
As CAP-M enters it's second to last year, the project will develop an exit strategy to ensure sustainability of project initiatives and impacts as well as successful capacity development and skills transfer to the NMCP and local partners. CAP-M's exit strategy will include: exit approaches and criteria, measurable benchmarks for criteria progress, a timeline, action steps and responsible persons/groups, and ways to assess progress.

CAP-M will engage local stakeholders and communities during strategy development to ensure a locally appropriate and achievable exit processes. CAP-Malaria's approach to implementation has involved close collaboration and integration with government and public sector programs ensuring government commitment and compatibility of project initiatives. CAP-M will develop a comprehensive exit strategy by the end of FY15 Q2.

## 10 STAFFING PLAN



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## ANNEX 1: Y4 SUMMARY OF ACTIVITIES BY IRS IN THE TARGET DISTRICTS

Provinces	District	No. of Villages	IRs	Activities	Remarks
Ranong	Kraburi	41 villages (A1: 6 clusters in 3 villages) (A2: 136 clusters in 41 villages)	IR1	Net distribution (lending) in 5 villages IPC by volunteers Community mobilization Motorcycle taxi	
			IR2	Integrate malaria service Training HPH staff	in Y4
			IR3	Province/district working group	
			IR4	Twin-cities	Expand to local twin-cities
	La-un	18 villages (A2: 45 clusters)	IR1	Net distribution in 5 villages IPC by volunteers Community mobilization Motorcycle taxi	Motorcycle taxi volunteers in Y4
			IR2	Integrate malaria service Training HPH staff	HPH started Q3,Y4 (La-un) (4 Malaria Post Workers to become CAP-M volunteers)
			IR3	Province/district working group	
			IR4	Twin-cities	
Chanthaburi	Pong Nam Ron	34 villages (A1/A2) (A1: 6 clusters in 4 villages) (A2: 62 clusters in 32 villages)	IR1	Net distribution in 5 villages IPC by volunteers Community mobilization	Volunteers in Y4
			IR2	Integrate malaria service Training HPH staff	Trained in Y3, start in Y4
			IR3	Province/district working group	
			IR4	Twin-cities	Pailin-Chanthaburi
	Soi Dao	21 villages (A1: 3 clusters in 2 villages) (A2: 30 clusters, in 21 villages))	IR1	Net distribution in 5 villages IPC by volunteers Community mobilization	Volunteers in Y4
			IR2	Integrate malaria service Training HPH staff	Trained in Y3, start in Y4
			IR3	Province/district working group	
			IR4	Twin-cities	Pailin-Chanthaburi
Sa Kaeo	Klong Hat**		IR1	Net distribution in 10 villages IPC by volunteers Community mobilization	New expansion area
			IR2	Integrate malaria service Training HPH staff	
			IR3	Province/district working group	
			IR4	Twin-cities	Sampavlon-Sa Kaeo

## ANNEX 2: DESCRIPTION OF PROVINCES UNDER CAP-MALARIA PROJECT AND ACTIVITIES

### Ranong (Kraburi and La-un districts)

Migrants in Kraburi and La-un districts are engaged in mostly rubber farming, and then palm oil, coffee, and cashew nuts. A KAP surveys was conducted in 34 villages in Kraburi (villages not covered by GF-SSF conducted migrant survey in Y1), results were shared among stakeholders.

Migrants captured through the health system and by NGOs activities are often longer term stay migrant workers (6 months or more). The proportions of migrant worker in La-un district tend to stay in the area for longer than period than those staying in Kraburi district. Therefore, CAP-Malaria engaged with farm owners who come in direct contact with migrant workers during their temporary stay to access these groups for HE and provide LLINs, as necessary. To capture mobile population, CAP-Malaria trained motorcycle taxi drivers in Kraburi district to provide HE and promote uptake of health services to mobile-migrant and daily casual cross-border population from Kawthoung. Motorcycle taxi stands are often where cross-border Burmese first embark in Thailand. Motorcycle taxis are popular method for traveling within Kraburi districts as it is not

easy for non-Thai residents or workers to obtain driver's licenses for vehicles or motorcycle in Thailand. Similar approach may be taken in La-Un district.

CAP-Malaria team conducted quarterly monitoring of LLINs available and use after their distribution, and determined that nets were provided to workers through employers but there was high turnover rates ~25-30% of workers who also left the area with the LLINs. In Y4, CAP-Malaria plan have allocated 3,500 LLINs to Ranong. For BCC activities, CAP-Malaria will put more emphasis on IPC activities through networks of migrant volunteers targeting migrant workers. Malaria week and other community mobilization activities will be continued on a quarterly basis based on situation analysis to identify appropriate villages. More emphasis in Year 4 will be on household and farm visits to increase face-time between providers (staffs and volunteers) with customers (residents and migrants at-risks). Existing VHV (under MOPH) will be engaged to provide HE to Thai and employers on a monthly basis.

While Kraburi district has the highest number of malaria cases in Ranong, La-un district observed an increase in malaria trend and higher proportion of *Pf* in 2012 and 2013. This could be partially explained by lack of intensified malaria control activities supported by GFR10 and others. In 2013, Ranong Province has allocated own funds (~100,000 Thai Baht) to intensify malaria control activities which included household IRS spraying (twice a year) in targeted villages (using 2012 data) and additional ACD by the VBDU, and for community awareness through hospital staffs. CAP-Malaria also contributed to the efforts last year by supporting the training and supervision of MP workers in 4 villages who provided PCD and ACD, as well as case management and HE to their community. In Kraburi, the, 18 MPs were discontinued. CAP-M will recruit as volunteers to engage in outreach and HE activities in the community, their previous work experiences will also benefit other volunteers in the network. Support integrated malaria services with primary health and maternal and child health will be expanded to Kraburi.



Ranong is subdivided into 5 districts ([amphoe](#)).

These are further subdivided into 30 subdistricts ([tambon](#)) and 167 villages ([mooban](#)): Muang Ranong (1), La-un (2), Kapoe (3), Kraburi (4), Suk Samran (5).

In Ranong, the twin-cities have resulted in good communication with Kawthoung Medical Office. These efforts included regular sharing of Malaria information and commitment to information on Tuberculosis, joint training on surveillance and responses to outbreaks, exchanged visits, malaria day activities, and joint map of health facilities. Both twin-cities counterparts agree to extend partnerships from the provincial-township level to district (Kraburi) and sub-township levels (Khamaukyi, Kawthoung). Twin-villages activities and exchanged visits of village chiefs have started in Y3 where malaria awareness activities were also included. In Y4, CAP-Malaria will focus on building partnership at the district-sub township levels.

#### Chanthaburi (Pongnamron and Soi Dao districts)

CAP-Malaria will distribute ~3500 in Pongnamron and Soi Dao districts.

BCC activities will place more emphasis on IPC activities through networks of MVs targeting migrant workers. Malaria week and other community mobilization activities



Chanthaburi is subdivided in 10 districts ([amphoe](#)).

These are further subdivided into 76 sub-districts ([tambon](#)) and 690 villages ([muban](#)): Muang Chanthaburi (1), Khlung (2), Tha Mai (3), Pongnamron (4) Makhom (5), Laem Sing, (6) Soi Dao (7), Geng Hang Maew (8); Na Yai Am (9), Khao Khitchakut (10).

will be

continued on a quarterly basis based on situation analysis to identify appropriate villages. Household and farm visits to increase face-time between providers (staffs and volunteers) with customers (residents and migrants at-risks) where existing VHV's will be engaged to provide HE to Thai and employers on a monthly basis.

Support integrated malaria services with primary health will be expanded in additional HPHs in Pongnamron and Soi Dao. Closely monitoring and supervision of the activities will be conducted on monthly basis that will include site visits and validation of data submitted.

Twin-cities activities will continue for Chanthaburi and Pailin. Because of shared borders with Sampav Loun, Chanthaburi will likely be included in the Sa Kaeo-Sampav Loun twin-cities.

### Sa Kaeo (Klong Hat\*\*)

CAP-Malaria will extend activities into Sa Kaeo to complement pre-elimination activities in Battambang. Recent increase in malaria cases among Thai patients due to logging activities in Watthana Nakhon and Muang districts. These individuals (mostly Thai) often stayed in the forest overnight and up to 10-12 days at a time. CAP-Malaria will review malaria situation by villages and risk groups as part of the situation analysis. Migrant population in Klong Hat is lower in numbers and tends to cross-border daily for work. Priority villages in Klong Hat will be identified based on the village map. Routine ACD in villages work well for Thai logger populations but it can only be done in limited amount due to limited resources from government budget. In addition, village based ACD will not be as effective as VBDU staffs are not aware of the movement of risk groups. CAP-Malaria plans to support workplace and remote ACD to find more suspected cases. CAP-M will identify VHV's and advocate for their roles in diagnosis and treatment (akin to MPs but without monthly incentives) of Thai risk groups upon their return to the village from the forest. BCC activities will be tailored to target the specific risk groups and dissemination in a sensitive manner due to their risk behavior. Formative assessment focus group and interview will help understand their behaviors and motivation. CAP-Malaria will determine target villages for LLIN distribution.



Sa Kaeo has 9 districts, 58 sub-districts, 731 villages.

1. Muang
2. Klong Hat
3. Ta Phraya
4. Wang Nam yen
5. Watthana Nakhon
6. Aranyaprathet
7. Khao Chakan
8. Khok Sung